

## **AMENDMENTS TO THE CLAIMS**

The following listing of claims will replace all prior versions and listings of claims in the application.

### **LISTING OF CLAIMS**

1. (Currently Amended) A dishwasher comprising:

a heating element adapted to heat water in the dishwasher, the heating element having a resistance adapted to change in response to the water temperature in the dishwasher;

a control panel providing a plurality of user identified wash cycles, wherein a selection of a wash cycle from the plurality of wash cycles sets a corresponding target resistance for the heating element from a plurality of target resistances and a corresponding water temperature for the dishwasher; and

a data processing unit coupled to the heating element operative to measure the resistance of the heating element and determine the water temperature in the dishwasher using from the resistance measurement, and at least one of turn on or off the heating element based on the target resistance.

2-3. (Cancelled).

4. (Currently Amended) The dishwasher of claim 3, wherein the target resistance ~~corresponds to the desired water temperature for the selected wash cycle and is selected from a plurality of pre-stored data including a plurality of target~~

~~resistances that correspond to a plurality of water temperatures stored in the data processing unit.~~

5. (Currently Amended) The dishwasher of claim ~~[[3]]~~ 1, wherein the data processing unit is operative to control the heating element to reach the target resistance.

6. (Currently Amended) The dishwasher of claim ~~[[3]]~~ 1, wherein the data processing unit is operative to calculate a period of time for energizing the heating element to reach the target resistance.

7. (Original) The dishwasher of claim 6, further comprising a timer in connection with the data processing unit for energizing the heating element for the calculated period of time.

8. (Original) The dishwasher of claim 1, further comprising a water valve coupled to a water supply for providing water to the dishwasher.

9. (Original) The dishwasher of claim 8, wherein the data processing unit is operative to control the water valve to open and close.

10. (Original) The dishwasher of claim 1, wherein the heating element has a positive temperature coefficient characteristic.

11. (Currently Amended) A dishwasher comprising:

a heating element operative to heat water in the dishwasher and to change in resistance in response to the water temperature in the dishwasher;

a processing system coupled to the heating element, the system ~~[[is]]~~ operative to measure the resistance of the heating element and determine the water temperature in the dishwasher using the resistance measurement;

a control panel coupled to the processing system and providing a plurality of wash cycles, the control panel ~~[[is]]~~ operative to set a target resistance and a desired water temperature based on a selection of one of the wash cycles;

a water supply operative to provide water to the dishwasher;

a valve device coupled to the water supply, the valve device ~~[[is]]~~ operative to open and close the supply of water flowing in the dishwasher from the water supply; and

a timer coupled to the processing system, the timer ~~[[is]]~~ operative to control the function of the heating element.

12. (Cancelled).

13. (Original) The dishwasher of claim 11, wherein the processing system along with the timer is operative to calculate a length of time for energizing the heating element to reach the target resistance and the desired water temperature.

14. (Original) The dishwasher of claim 11, wherein the target resistance corresponds to the desired water temperature.

15. (Original) The dishwasher of claim 11, wherein the resistance of the heating element corresponds to the water temperature in the dishwasher.

16. (Original) The dishwasher of claim 11, wherein the heating element has a positive temperature coefficient characteristic.

17-29. (Canceled)

30. (Currently Amended) A household washing appliance of the type that is connected to a household water supply, the household washing appliance comprising:

a heating element for heating water supplied to the appliance to a desired temperature, the heating element having a resistance which is adapted to vary with the temperature of the water in the appliance;

a user input interface comprising a selector switch having a plurality of user selectable states, and wherein a state of the selector switch defines a target resistance; and

a processing unit controlling the operation of the heating element, the processing unit measuring the resistance of the heating element and comparing a measured resistance with [[a]] the target resistance.

31. (Previously Presented) The household washing appliance of claim 30, wherein the heating element has a positive temperature coefficient characteristic.

32. (Previously Presented) The household washing appliance of claim 30, wherein the measured resistance of the heating element corresponds to the temperature of the water in the appliance, and wherein the target resistance corresponds to the desired temperature.

33. (Currently Amended) The household washing appliance of claim 32, further comprising:

~~a user input interface comprising a selector switch, and wherein a state of the selector switch defines the target resistance;~~

a valve coupled to the household water supply, the valve controlling the supply of water from the household water supply to the appliance; and

wherein the processing unit comprises a data processor and a timer.

34. (Previously Presented) The household washing appliance of claim 33, wherein the processing unit controls the operation of the valve.

35. (Previously Presented) The household washing appliance of claim 33 wherein the user input interface further comprises a control panel operably coupled to the processing unit, the control panel defining a plurality of wash cycles, and the selector switch being operable to select at least one of the plurality of wash cycles.



36. (Previously Presented) The household washing appliance of claim 35 wherein the selection by the selector switch of at least one of the plurality of wash cycles sets the target resistance.

37. (Previously Presented) The household washing appliance of claim 32, wherein the processing unit is operable to calculate a time period during which the heating element is energized in order to achieve the desired water temperature.

38. (Currently Amended) A household washing appliance of the type that is connected to a household water supply, the household washing appliance comprising:

a valve coupled to the household water supply;

a user input interface providing a user a plurality of user defined temperature selections;

a heating element for heating water supplied to the appliance to a desired temperature selected at the user input interface, the heating element having a resistance which is adapted to vary with the temperature of the water in the appliance; and

a processing unit controlling the operation of the heating element based on the user defined temperature selection, measuring the resistance of the heating element, and comparing a measured resistance with a target resistance.

39. (Currently Amended) A household washing appliance of the type that is connected to a household water supply, the household washing appliance comprising:

a valve coupled to the household water supply;

a user input interface providing a user a plurality of user defined wash cycles;

a heating element for heating water supplied to the appliance to a desired temperature selected at the user input interface, the heating element having a resistance which is adapted to vary with the temperature of the water in the appliance; and

a processing unit controlling the operation of the heating element based on the user defined wash cycle, measuring the resistance of the heating element, and comparing a measured resistance with a target resistance, the processing unit operable to calculate a time period during which the heating element is energized in order to achieve the desired water temperature.